



Quad Charts
PAP 01 through 16
August 10, 2010

Program Management Office

Status of PAP01: Role of IP in the Smart Grid







Updated July 30, 2010.

















A#	Current Activities and Accomplishments
A3	Completed initial set of application requirements for select scenarios by Open SG-Net
A4	Compiling additional requirements from industry documents in cooperation with Open SG-net Working Group
I#	Issues, Concerns & Help Needed
I1	Need to develop guidelines on the use of IPv4 versus IPv6
I2	Need to compile and use requirements for systems and network management functions in order to develop protocols and guidelines for SG management and security

S	D#	Deliverables
✓	D1	Application communication requirements matrix
●	D2	IETF RFC supporting meter communication standard(s) (ANSI C12.22)
●	D3	Standards gap analysis
✓	D4	Identify Core set of IP protocols
●	D5	Revised Scope (see proposed tasks in file below)

S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
✓	TPMO1	PAP Initiation	2009-09	2009-09	SGiP	
✓	TPMO2	PAP Charter Developed	2009-10	2009-10	SGiP	
✓	TPMO3	Form Initial Team	2009-11	2009-11	SGiP	
●	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-11	2010-07	SGiP	
●	TPMO5	SSO Identified	2010-07		Open SG-net IETF	D1, D3, D2, D4
	TPMO6	Development of Requirements By PAPWG	2010-10		SGiP	
	TPMO7	Requirements Handoff to SSO	2010-12		SSO	
	TPMO8	Standards Handback to PAPWG from SSO				
	TPMO9	SSO Results submitted to GB by PAP after completing analysis				
	TPM10	PAP Complete				

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Develop a set of requirements for different Smart Grid applications	Dec-2009	Dec-2009	Open SG-net	D1
✓	T2	Identify a core Protocol Suite for IP-based Smart Grid	Dec-2009	Dec-2009	IETF	D4

	T3 Develop application specific protocol requirements	Jul-2010		Open SG-net	D1
	T4 Perform gap analysis	Jul-2010		OpenSG /IETF	D3, D4
	T5 Deliver RFC on C12.22 to ANSI	Jul-2010		IETF	D2
	T6 Meet at OpenSG on July 22 to develop action plan	Jul-2010	Jul-2010	PAP	D5
	T7 Describe achieving security with IP suite of protocols	Nov-2010		PAP	D5
	T8 Develop IP architecture	Nov-2010		PAP	D5

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			
July 2010			

Status of PAP02: Wireless Communications for the Smart Grid (6.1.5)

Updated May 27, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A4	Initial set requirements for AMI and Distribution Automation completed with Open SG-Net	✓	D1	Application Communication Requirements Matrix Template
A5	Initial Guidelines Document Outline Developed and Chapters in Development	✓	D2	Application communication matrix
		✓	D3	Wireless Capability Matrix Template
		✓	D4	Wireless capability matrix
		🌐	D5	Standards development guidelines

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Call for input to Task 1 to compile additional application communication requirements with specific quantitative data needed for further evaluating wireless communication technologies	✓	TPMO1	PAP Initiation	2009-08	2009-08	SGiP	All
		✓	TPMO2	PAP Charter Developed	2009-11	2009-11	SGiP	All
I2	Call for input to Task 6 to contribute tools and methods and conduct the evaluation of wireless technologies based on the application requirements	✓	TPMO3	Form Initial Team	2009-11	2009-11	SGiP	All
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2010-01	2010-01	SGiP	All
		✓	TPMO5	NIST Technical Wireless Evaluation Model	2009-12	2009-12	NIST	D5
		✓	TPMO6	Development of Requirements By Open SG-Net	2010-05	2010-05	Open SG	D1,D2
		✓	TPMO7	SSO Wireless Capabilities Matrix	2010-01	2010-01	SSOs	D3,D4
		🌐	TPMO8	Draft SG Wireless Guidelines Development Phase I	2010-07		Assigned	D5
		🌐	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2010-09			D5
			TPM10	PAP Complete				

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	NIST Technical Wireless Evaluation Model Development	Dec 2009	Dec 2009	NIST Technical	D5



	T2 SSO Requirements Development by Open SG Net	May 2010	May 2010	Open SG Net	D1,D2
	T3 SSO Wireless Capabilities Matrix	Jan 2010	Jan 2010	IEEE 802, 3GPP,3GPP2, ATIS, TIA	D3,D4
	T4 Draft Smart Grid Wireless Guidelines Report	July 2010		PAP 2 and SSO Contributors	D5
	T5 NIST Reviews and Publishes Wireless Guidelines Report (NISTIR)	Sept 2010		NIST Technical	D5
	T6 PAP 2 Analyses Report and Submits to SGIP GB	Sept-2010		PAP 2 SSOs and Contributors	D5

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			
July 2010			

Status of PAP03: Develop Common Specification for Price and Product Definition

Updated August 10, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A10	PAP03WG has met most recently on July 14, 2010; next meeting August 11	✓	D1	High level scoping document
A11	PAP03WG defining next steps for requirements evaluation, met on June 16 and accepted requirements for balloting	✓	D2	Price use cases and requirements
A12	PAP03WG defining next steps for deliverables evaluation	✓	D3	Information model and summary of product characteristics of interest to energy consumers
A13	PAP03WG met on June 21, 2010, in Knoxville to evaluate EMIX specification	✓	D4	Draft price and product definition specification to others
A14	PAP03WG approved core requirements on June 21	✓	D5	Requirements Evaluation and Artifacts
A15	Comments sent to EMIX week of June 21 and June 28	✓	D6	Deliverables Evaluation and Artifacts
A16	The EMIX TC is addressing SGIP guidance and working on their next draft (first revision posted July 12, see D4)			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Need focused coordination with DER & PEV PAPs and to include specific tasks in PAP09 and PAP11	✓	TPMO1	PAP Initiation	2009-07	2009-07	PAP03WG	TWiki
I6	Need to setup team(s) to review deliverables once received back from SSOs.	✓	TPMO2	PAP Charter Developed	2009-08	2009-08	PAP03WG	TWiki
I7	Need to see updated artifacts (post comment period) from OASIS and ZigBee for PAP03WG Review	✓	TPMO3	Form Initial Team	2009-08	2009-08	PAP03WG	TWiki
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-08	2009-08	PAP03WG	TWiki
		✓	TPMO5	SSO Identified	2009-07	2009-07	PAP03WG	TWiki
		✓	TPMO6	Development of Requirements By PAPWG	2010-07	2010-07	PAP03WG	D5
		✓	TPMO7	Requirements Handoff to SSO	2010-07	2010-07	PAP03WG	D5
		🟡	TPMO8	Standards Handback to PAPWG from SSO	2010-12		NAESB, OASIS	
		🟡	TPMO9	SSO Results submitted to GB by PAPWG after completing analysis	2011-01		PAP05WG	D6
		🟡	TPM10	PAP Complete	2011-04		SGIPGB	N/A

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Develop high level scoping document	2009-11	2009-11	NAESB	D1
✓	T2	Develop price and product definition use cases & requirements	2009-11	2010-04	NAESB	D2
✓	T3	Meet and present status on deliverables at Grid-Interop	2009-11	2009-11	PAP03WG	D1
✓	T4	Plan to import and use material from PAP04	2009-12	2009-12	NAESB	D2
✓	T5	Plan to import and use material from PAP04	2009-12	2009-12	OASIS	D3
✓	T6	Plan to import and use material from PAP04	2009-12	2010-05	ZigBee	D3
✓	T7	Data model draft publicly visible	2010-02	2010-02	OASIS	D3
✓	T8	Data model draft publicly visible	2010-02	2010-04	ZigBee	D3
✓	T9	Draft price and product definition specification to others	2010-04	2010-05	OASIS	D4
✓	T10	Draft price and product definition specification to others	2010-04	2010-04	ZigBee	D4
✓	T11	Requirements evaluation; define scope/schedule/deliverables	2010-06	2010-06	PAP03WG	D5
TBD	T12	Deliverables evaluation; define scope/schedule/deliverables	TBD	TBD	PAP03WG	D6

Status	Schedule	Deliverables	Resources
June 2010	●	●	●
July 2010	●	●	●
August 2010	●	●	●

Status of PAP04: Develop Common Scheduling Mechanism for Energy Transactions

Updated August 2, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A10	Use Cases and requirements delivered April 2010	✓	D1	Update pre-existing IETF standards for extensibility
A11	Deliverable D3 completed April 2010	✓	D2	Standard XML Serialization for Bi-directional Translation
A12	APIs for calendar to calendar communications in public review May 2010	✓	D3	Use cases and requirements to test the standard
A13	WS-Calendar public review started May 2010, ends June 21, 2010, sent to IEC participants	✓	D4	Associated semantics for schedule performance related to WS-Calendar standard
A14	xCal submitted to IETF to finish Standards Track process	✓	D5	Create essential WS APIs for Calendars and Schedules
A15	Joint PAP03-04-09 Webinar took place June 9; planning completed for requirements for each	🟡	D6	Align APIs and semantics across SDOs
A16	The PAP04 team held a face-to-face review of WS-Calendar and delivered guidance on the TC's work and furthering D6			
A17	The WS-Calendar TC is addressing SGIP guidance and working on their next draft			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I2	Other PAPs need to clarify their consumption of PAP04 output and coordinate as necessary.	✓	TPMO1	PAP Initiation	2009-07	2009-07	SGIP	
I3	OASIS work would benefit from participation of representatives of manufacturing scheduling.	✓	TPMO2	PAP Charter Developed	2009-08	2009-08	SGIP	
I4	ISO2002 participation in OASIS TC would improve scope and acceptance of deliverable.	✓	TPMO3	Form Initial Team	2009-08	2009-08	SGIP	
I5	ZigBee has not clearly addressed PAP04 in its work to date (See PAP03 tables)	✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-08	2009-08	SGIP	
I6	Need to integrate PAP07 requirements	✓	TPMO5	SSO Identified	2009-07	2009-07	SGIP	
		✓	TPMO6	Development of Requirements By PAPWG	2009-12	2009-12	NAESB	D3
		✓	TPMO7	Requirements Handoff to SSO	2009-12	2009-12	NAESB	D3
		🟡	TPMO8	Standards Handback to PAPWG from SSO	2010-4Q		OASIS	
		🟡	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2010-4Q		SGIP	
		🟡	TPM10	PAP Complete	2011-02		SGIP	
S	T#	PAP Work Tasks		Due	Actual	Resp	D#	

✓	T1	Update IETF iCalendar format to allow extensibility	2010-01	2009-09	CalConnect	D1
✓	T2	Standard XML serialization of extensible iCalendar out for public review	2010-01	2009-11	CalConnect	D2
●	T3	Standard APIs for Calendar-to-Calendar communications for inclusion in WS-Calendar	2010-08		CalConnect	D4
✓	T4	Submit output of T2 to IETF for approval as Standards Track RFC	2010-05	2010-05	CalConnect	D1
✓	T5	Develop Smart Grid use cases and requirements for for use in WS-Calendar	2009-10	2010-04	NAESB	D3
✓	T6	Create Committee to develop service-oriented schedule profiles based on IETF xCalendar and APIs (WS-Calendar)	2010-01	2010-01	OASIS	D5
✓	T7	WS-Calendar work out for public review	2010-04	2010-05	OASIS	D5
✓	T8	Submission of WS-Calendar public review draft to IEC Power Management CIM	2010-05	2010-05	OASIS	D6
✓	T9	Development of Requirements by PAPWG [See NOTE]	2010-07	2010-07	PAP04WG	D3
●	T10	Standards Handback to PAPWG from SSO	2010-4Q		OASIS	D6

NOTE: Original [D3](#) completed; T9 addresses high level requirements from the NIST Framework and Roadmap.

Status	Schedule	Deliverables	Resources
April 2010	●	●	●
May 2010	●	●	●
June 2010	●	●	●
July 2010	●	●	●

Status of PAP05





Updated August 10, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A4	AEIC AMTI group preparing a gap report alongside the guidelines for delivery to PAP05WG and other groups (first draft on 08/06)		D1	Utility requirements mapping
			D2	Expression of AEIC v2.0 Guidelines in terms of additional device class(es)
A5	AEIC AMTI group continually (weekly) revising draft document (now at Draft 9.1 on 8/2/2010)		D3	Revision of AEIC v1.0 Guidelines
			D4	Data type profiles for specific Use Case(s)
A6	Requirements developed and reviewed on 7/23/2010		D5	White Paper/Presentation on ANSI metering protocol standards
A7	Requirements circulated for approval per PMO Consensus Process		D6	New capabilities as developed during PAP05 work
			D7	Publicly available training materials
A8	Forming Voting Group to approve requirements, prepare for AEIC deliverable evaluation		D8	Design Document
			D9	Analysis
			D10	Use Cases and Requirements
			D11	Gap Report

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	AEIC final document will be ready in July (slipping further from 5/31)		TPMO1	PAP Initiation	2009-08	2009-08	PAP05WG	TWiki
I2	Team will need broader participation for review of AEIC deliverable		TPMO2	PAP Charter Developed	2009-08	2009-08	PAP05WG	TWiki
I3	The delivery of the final AEIC document in July (now August) instead of 5/31 negatively impacts the schedule.		TPMO3	Form Initial Team	2009-08	2009-08	PAP05WG	TWiki
			TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-08	2009-08	PAP05WG	TWiki
			TPMO5	SSO Identified	2009-08	2009-08	PAP05WG	TWiki
			TPMO6	Development of Requirements By PAPWG	2009-08	2009-08	PAP05WG	TWiki
			TPMO7	Requirements Handoff to SSO	2009-08	2009-08	PAP05WG	TWiki
			TPMO8	Standards Handback to PAPWG from SSO	2010-08		AEIC	1,2,6,8
			TPMO9	SSO Results submitted to GB by PAPWG after completing analysis	2010-09		PAP05WG	9
			TPM10	PAP Complete	2010-10		SGIPGB	N/A

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	T1	Map utility requirements	05/31/2010		AEIC AMTI	D1

		expressed via AEIC Guidelines v2.0 to Device Classes [now early August]				
	T2	Express AEIC Guidelines v2.0 in terms of one or more additional Device Classes [now early August]	05/31/2010		AEIC AMTI	D2
	T3	Complete revision of AEIC Guidelines v2.0	12/2009	12/11/2009	AEIC AMTI	D3
	T4	Minimize the variations in data types transported from and to End Devices (real-time communication and enterprise data representations).	01/31/2010	03/22/2010	AEIC AMTI	D4
	T5	Socialize the existence of additional Tables within ANSI C12.21-2006 and C12.22-2008 via WP/PPT report.	05/31/2010	05/25/2010	Team Members	D5
	T6	Provide definitions and recommendaions for Function Control Limiting Table values and general configuration. [now early August]	05/31/2010		AEIC AMTI	D6
	T7	Develop education package around ANSI C12.18-2006, C12.19-2008, C12.21-2006 and C12.22-2008.	04/15/2010	05/17/2010	Team Members	D7

	T8	Minimize variation and maximize interoperability of Application Services and behaviors within ANSI C12.18-2006, ANSI C12.19-2008, ANSI C12.21-2006 and ANSI C12.22-2008. [now early August]	06/15/2010		AEIC AMTI	D8
	T9	PAP05WG to analyze D3; Will receive final deliverable early August, will have to adjust delivery date when document is received.	07/15/2010		PAP05WG	D9
	T10	Report on Framework-based Use Cases and Requirements [now early August]. Will receive final deliverable early August, will have to adjust delivery date when document is received.	05/31/2010		Team Members	D10
	T11	Create and deliver Gap Report [now early August]. Will receive final deliverable early August,	06/15/2010		AEIC AMTI	D11



		will have to adjust delivery date when document is received.				
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Status	Schedule	Deliverables	Resources
June 2010			
July 2010			
August 2010			

Status of PAP06

Updated August 10, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable		
A1	Sub-group has begun discussion of Use Cases and Requirements		D1	Key Use Cases		
A4	Requirements reviewed on 7/23/2010		D2	Requirements		
A5	Requirements circulated per PMO Consensus Process for approval		D3.1	Mapping between ANSI C12.19-2008 and IEC 61850		
A6	Forming Voting Group to ballot requirements, prepare for future deliverable evaluations		D3.2	Mapping between ANSI C12.19-2008 and MultiSpeak v4		
			D3.3	Mapping between ANSI C12.19-2008 and IEC 61968-9		
			D4	Integration and harmonization roadmap		

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Need to explore explicit recruitment of new resources, including explicit experts for the different standards		TPMO1	PAP Initiation	2009-08	2009-08	PAP06WG	TWiki
I2	Need to coordinate with PAP05WG , including explicit coordination requirements (review of PAP05WG Deliverable 3)		TPMO2	PAP Charter Developed	2010-01	2010-01	PAP06WG	TWiki
I3	Schedule slippage of PAP05 tasks impacting PAP06 tasks (same resources involved)		TPMO3	Form Initial Team	2009-08	2009-08	PAP06WG	TWiki
I4	PAP6WG would function more efficiently if equally competent but separate resources from PAP05WG could be found		TPMO4	Develop List of Deliverables and Tasks with Assignments	2010-01	2010-01	PAP06WG	TWiki
			TPMO5	SSO Identified	2010-04	2010-04	PAP06WG	TWiki
			TPMO6	Development of Requirements By PAPWG	2010-06		P6WG1	TWiki
			TPMO7	Requirements Handoff to SSO	2010-06		PAP06WG	
			TPMO8	Standards Handback to PAPWG from SSO	2010-09			
			TPMO9	SSO Results submitted to GB by PAPWG after completing analysis	2010-10		PAP06WG	
			TPM10	PAP Complete	2011-01		SGIPGB	

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	T1	Identify key use cases (should occur before	2010-06		P6WG1	D1

		mappings are performed)				
	T2	Requirements development	2010-06		P6WG1	D2
	T3.1	Define mapping between ANSI C12.19-2008 and IEC 61850 (relevant part) for the key use cases	2010-09		P6WG3 .1	D3.1
	T3.2	Define mapping between ANSI C12.19-2008 and MultiSpeak v4 for the key use cases.	2010-09		P6WG3 .2	D3.2
	T3.3	Define mapping between ANSI C12.19-2008 and IEC 61968-9 (minimally) for the key use cases	2010-09		P6WG3 .3	D3.3
	T4	Create roadmap to integrate and harmonize challenges with MultiSpeak , IEC and COSEM standards	2010-09		P6WG4	D4

Status	Schedule	Deliverables	Resources
June 2010			
July 2010			
August 2010			

Status of PAP07: Energy Storage Interconnection Guidelines

Updated August 10, 2010

A	Current Activities and Accomplishments
A5	Learned about an IEC Fast-Track "database format" process for rapid approval of additions and modifications for IEC 61850 - requiring weeks, not years! IEC TC57 WG17 agreed to use this method. It will require establishing a database of IEC 61850 object models and working with the IEC to set up the correct procedure for approving additions/modifications.
A6	Presented ES-DER requirements to the IEC TC57 WG17, and received agreement that they would help develop the IEC 61850 object models as part of Edition 2 of IEC 61850-7-420. Edition 2 will use the Fast Track database format approach.
A7	IEC 61850 information models were developed for some of the key Use Cases, and will be submitted to the IEC TC57 WG17.
A8	The first meeting of the IEEE 1547.8 will be held in late August. The balloting for IEEE 1547.6 is completed.
A9	Mapping of 61850 DER models to SEP had a very successful first meeting, with the SEP people achieving a better understanding of 61850 structures, and the 61850 people understanding SEP better. Funded efforts will most likely finalize this work.

S	D#	Deliverable
✓	D1	Task 0 Activities: Development of Scoping Study Document (MS Word version)
✓	D2	Task 1a Use Cases: List of ES-DER Use Cases (organized by type) (MS Word version)
✓	D3	Task 4 Use Cases Descriptions for Key ES-DER Use Cases (MS Word version) - 1st draft complete
🕒	D4	Completing IEEE 1547.4 & .6 per IEEE rules See IEEE 1547 Web Page
🕒	D5	Initiated PAR for IEEE 1547.8 per IEEE rules See IEEE 1547 Web Page




I	Issues, Concerns & Help Needed
I1	See Task 4a: PAPs 3, 4, & 9 Coordination: Pricing and Scheduling models involving Demand Response for ES-DER systems, particularly with respect to ancillary services, such as var management, frequency regulation, and harmonic reduction
I2	See Task 4b: PAP 10 Coordination: Energy Usage models and interactions with utilities and 3rd Parties which involve ES-DER usage and ancillary services. The decision was made in PAP 10 to defer modeling of DER "energy usage" until later. At that time, the ES-DER Use Cases and SDO models will need to be coordinated with the types of models needed for energy usage.
I3	See Task 4c: PAP 11 Coordination: Interactions involving PEV battery and charger capabilities. This coordination has started, but needs to be continued as the PAP 11 Use Cases are completed and made public.
I4	See Task 4d: PAP 16 Coordination: Wind Plant interactions involving Energy Storage - initial review does not seem to have any specific concerns, but the models










S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
✓	TPMO1	PAP Initiation	2009-08	2009-08	SGIP	
✓	TPMO2	PAP Charter Developed	2009-08	2009-08	SGIP	
✓	TPMO3	Form Initial Team	2009-08	2009-08	SGIP	
✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-08	2009-08	SGIP	
✓	TPMO5	SSO Identified	2009-08	2009-08	PAP 7	
✓	TPMO6	Development of Requirements By PAPWG	2010-04	2010-04	PAP 7	
✓	TPMO7	Requirements Handoff to SSO	2010-06	2010-06	PAP 7	D3 & D5
	TPMO8	Standards Handback to	2011-		IEEE	



for wind and other ES-DER must remain consistent, so on-going liaisons are necessary		PAPWG from SSO		06	and IEC																																																		
15	See Task 3: Help is requested for experts to participate in the new IEEE 1547.8 effort, including power system experts, regulatory experts, reliability experts, and experts "in the future capabilities of the Smart Grid with ES-DER".	TPM09	SSO Results submitted to GB by PAP after completing analysis	2011-08	PAP 7																																																		
		TPM10	PAP Complete	2011-11	SGIP																																																		
16	See Task 4f: Need support to develop the IEC Fast Track database format requirements so that the IEC central office can implement the database input, output, and user interface as most appropriate and effective for vendors and utilities.	<table> <tr> <th>S</th><th>T#</th><th>PAP Work Tasks</th><th>Due</th><th>Actual</th><th>Resp</th><th>D#</th></tr> <tr> <td>✓</td><td>T0</td><td>Scoping Document Draft v1</td><td>Nov-2009</td><td>Nov 2009</td><td>PAP 7</td><td>D1</td></tr> <tr> <td>✓</td><td>T1</td><td>Collect Use Cases with Brief Narratives</td><td>Mid-Feb-2010</td><td>Mid-Feb list of Use Cases was completed</td><td>PAP 7 members</td><td>D2</td></tr> <tr> <td>●</td><td>T2</td><td>Complete IEEE 1547.4 (Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power System) & .6 (Draft Recommended Practice For Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks)</td><td>Aug-2010</td><td>1547.4 is currently in ballot, as per IEEE 1547 balloting schedule, and due for final release by July/August 2010. 1547.6 is in pre-ballot and is expected to be released by December 2010</td><td>IEEE 1547</td><td>D4</td></tr> <tr> <td>✓</td><td>T3</td><td>Initiate IEEE 1547.8 to address interconnection issues of storage (title not known yet)</td><td>Feb-2010</td><td>IEEE PAR approved in March, with first meeting scheduled for August 2010</td><td>IEEE 1547</td><td>D5</td></tr> <tr> <td>✓</td><td>T4</td><td>Prioritize and develop details for key ES-DER Use Cases</td><td>Mar-2010</td><td>April 5 2010</td><td>NIST & PAP 7</td><td>D3</td></tr> <tr> <td>✓</td><td>T4a</td><td>Provide key ES-DER Use Cases to</td><td>April 2010</td><td>April 2010: Use Cases were</td><td>PAP 7, PAPs 3,</td><td>D3</td></tr> </table>					S	T#	PAP Work Tasks	Due	Actual	Resp	D#	✓	T0	Scoping Document Draft v1	Nov-2009	Nov 2009	PAP 7	D1	✓	T1	Collect Use Cases with Brief Narratives	Mid-Feb-2010	Mid-Feb list of Use Cases was completed	PAP 7 members	D2	●	T2	Complete IEEE 1547.4 (Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power System) & .6 (Draft Recommended Practice For Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks)	Aug-2010	1547.4 is currently in ballot, as per IEEE 1547 balloting schedule, and due for final release by July/August 2010. 1547.6 is in pre-ballot and is expected to be released by December 2010	IEEE 1547	D4	✓	T3	Initiate IEEE 1547.8 to address interconnection issues of storage (title not known yet)	Feb-2010	IEEE PAR approved in March, with first meeting scheduled for August 2010	IEEE 1547	D5	✓	T4	Prioritize and develop details for key ES-DER Use Cases	Mar-2010	April 5 2010	NIST & PAP 7	D3	✓	T4a	Provide key ES-DER Use Cases to	April 2010	April 2010: Use Cases were	PAP 7, PAPs 3,	D3
S	T#	PAP Work Tasks	Due	Actual	Resp	D#																																																	
✓	T0	Scoping Document Draft v1	Nov-2009	Nov 2009	PAP 7	D1																																																	
✓	T1	Collect Use Cases with Brief Narratives	Mid-Feb-2010	Mid-Feb list of Use Cases was completed	PAP 7 members	D2																																																	
●	T2	Complete IEEE 1547.4 (Draft Guide for Design, Operation, and Integration of Distributed Resource Island Systems with Electric Power System) & .6 (Draft Recommended Practice For Interconnecting Distributed Resources With Electric Power Systems Distribution Secondary Networks)	Aug-2010	1547.4 is currently in ballot, as per IEEE 1547 balloting schedule, and due for final release by July/August 2010. 1547.6 is in pre-ballot and is expected to be released by December 2010	IEEE 1547	D4																																																	
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✓	T4a	Provide key ES-DER Use Cases to	April 2010	April 2010: Use Cases were	PAP 7, PAPs 3,	D3																																																	

		PAPs 3, 4, and 9, and discuss whether the ES-DER schedules and pricing signal requirements are covered adequately		provided	4, 9	
✓	T4b	Provide key ES-DER Use Cases to PAP 10 and discuss whether ES-DER issues are adequately covered under Energy Usage	April 2010	April 2010: Use Cases were provided - PAP 10 has deferred ES-DER considerations	PAP 7, PAP 10	D3
✓	T4c	Provide key ES-DER Use Cases to PAP 11 and discuss if additional PEV Use Cases need to be added to ES-DER Use Cases	June 2010	May 25: Use Cases were provided to PAP 11, discussions are taking place	PAP 7, PAP 11	D3
✓	T4d	Provide key ES-DER Use Cases to PAP 16 and discuss if any addition actions need to be taken by PAP 16 for handling Wind plus ES-DER	April 2010	April 2010: Use Cases were provided - no specific issues found at this time - the IEC TC57 WG17 may pick up later	PAP 7, PAP 16	D3
✓	T4e	Develop Information Exchange requirements for key ES-DER Use Cases	June 2010	June 2010	PAP 7	D3
✓	T4f	Hand off Information Exchange requirements for key ES-DER Use Cases to IEC TC57 WGs 14 & 17	June 2010	June 2010: Object modeling requirements handed off to IEC TC57 WG17	PAP 7	D3
🟢	T5	SDOs to start development of safety codes and	Aug 2010		UL, NEC-NFPA70, SAE, and	D5

		test methods to ensure safe and reliable implementation of Task 3 - specifically UL 1741			CSA	
	T6a	Review and approve P1547.8 results as meeting PAP 7 requirements	June 2011		PAP 7	
	T6b	Review and approve IEC 61850 results as meeting PAP 7 requirements	June 2011		PAP 7	
	T6c	Review and approve safety and test code results as meeting PAP 7 requirements	June 2011		PAP 7	

Status	Schedule	Deliverables	Resources
June 2010			
July 2010			
Aug 2010			

Status of PAP08: CIM/61850 for Distribution Grid Management

Updated August 5, 2010

A	Current Activities and Accomplishments
A1	MultiSpeak UML modeling, CIM tools, updates to CIM modeling, and web conferences are on-going in IEC TC57 WG14.
A2	Have selected key ADA DOMA/FLIR/ VVWO Use Cases for refinement and have completed 100% of the necessary details in text form (using IntelliGrid template). These are being reviewed by the team. See D5 Deliverable.
A3	Have converted the Use Cases into UML Sequence Diagrams. After review by PAP 8 members, these will be submitted to IEC TC57 WG14 (CIM) for application-to-application interactions, and to IEC TC57 WG17 (61850) for distribution automation and DER interactions. See D6 deliverable
A4	Reached out to WG 14 and CIMug to coordinate task T2 (5/27/2010)
A5	Identified what our deliverable is to WG 14 for T9. Identified steps to produce the deliverable. (5/25/2010)
A6	DOMA/FLIR/VVWO Use Case Developed
A7	MultiSpeak (R) Version 4.1 delivered
A8	CIMTool specification delivered
A9	Next steps identified for task T9 (7/13/2010)
A10	First pass of the messages identified in the Use Case is completed. The sequence diagram is being rewritten to simplify the model.

S	D#	Deliverable
✓	D1	UML Model of MultiSpeak
🟢	D2	UML Tools for CIM (deliverable is internal to IEC TC57 WG14)
✓	D3	Interoperability Test of CIM Wires Model (completed Nov 2009 - refer to IEC)
🟢	D4	Web conferences of CIM Modeling team (on-going as needed for new models)
✓	D5	Distribution Grid ManagementSG UC nm3.doc: Updated version of the DGM Use cases ADA DOMA/FLIR/ VVWO Use Cases with requirements for Distribution Grid Management
✓	D6	ADA Functions - Sequence Diagrams.pdf: ADA_Functions_-_Sequence_Diagrams.pdf Use Cases with appropriate details for IEC TC57 WGs (61850 and CIM)
🟡	D7	IEC 61968, Parts 3 & 5, CIM updated standards to meet the PAP 8 Use Case application-to-application requirements
🟡	D8	IEC 61850-7-4xx standards to meet the PAP 8 Use Case interactions with field equipment

I	Issues, Concerns & Help Needed
I1	There may need to some assistance, possibly from IEC TC57 WG19, on determining whether certain object modeling should be undertaken in WG 14 (CIM) or WG17 (61850)
I2	On-going, cross-PAP coordination is needed, particularly when Use Cases involve not only distribution operations but also demand response, load control, and other issues being addressed by other PAPs.
I3	🔴 IEC TC57 WG14 needs additional experts and additional time from existing experts to update the CIM (IEC 61968 Parts 3 & 5, as well as other parts) to meet the requirements described in the PAP 8 Use Cases (See Help Wanted Page)

S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
✓	TPMO1	PAP Initiation	2009-09	XXXX-XX	SGIP	
✓	TPMO2	PAP Charter Developed	2009-10	2009-10	SGIP	
✓	TPMO3	Form Initial Team	2009-11	2009-11	SGIP	
✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2010-06	2010-06	SGIP	
✓	TPMO5	SSO Identified	2009-11	2009-11	SGIP	
🟢	TPMO6	Development of Requirements By PAPWG	2010-08		SGIP	
🟢	TPMO7	Requirements Handoff to	2010-		SGIP	






		SSO	08			
	TPM08	Standards Handback to PAPWG from SSO	2011-06		IEC	
	TPM09	SSO Results submitted to GB by PAP after completing analysis	2011-07		SGIP	
	TPM10	PAP Complete	2011-10		SGIP	
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	T1	UML model for MultiSpeak	Jun-2010	Jun-2010	NRECA	D1
	T2	Team for UML tools for CIM	Jun-2010	Jun-2010	IEC TC57 WG14	D2
	T3	Team for interoperability testing	Nov-2009	Nov-2009	IEC TC57 WG14	D3
	T4	Web conference CIM Modeling team	Nov-2009	Nov-2009	IEC TC57 WG14	D4
	T5	Create SG use case team	Nov-2009	Nov-2009	Mini-T&D team	D5
	T6	Use Case master list	Jan-2010	Jan-2010	Mini-T&D team	D5
	T7	Key Use Cases prioritized and refined	Feb-2010	Feb-2010	UCI	D5
	T8	Review Use Cases and complete Sequence Diagrams of those Use Cases	Apr-2010	Apr-2010	NIST, PAP 8	D6
	T9	Provide completed Use Cases to the IEC TC57 WGs 14 & 17	August-2010		NIST, PAP 8	D6
	T10	Track progress on developing CIM and 61850 models from the Use Cases	Dec-2011?		IEC TC57 WG14 & 17	D7&8
	T11	Produce Mapping between IEEE PC 37.239 and CIM and 61850	TBD		This is being considered for another PAP	




Status	Schedule	Deliverables	Resources
April 2010			

May 2010			
June 2010			
July 2010			

Status of PAP09: Standard DR and DER Signals

Updated August 10, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A1	SEP2 Development on-going. Technical Requirements Document (2009-12) completed public review		D1	Standard Vocabulary for DR and DER
			D2	Direct Load Management Communication
			D3	Collaborative Load Management Communication
A2	NAESB work substantially complete, awaiting standardization vote		D4	Grid safety Signals
A3	EnergyInterop building upon work of OpenADR		D5	DER support (deferred)
A4	Monthly PAP meetings with PAP03 and PAP04		D6	Other signals and/or an extensibility mechanism
A5	NAESB Use Cases and Requirements Delivered April 2010			
A6	SEP2 Application Specification 0.7 out for public review April 2010			
A7	OASIS Energy Interoperation Specification out for public review May 2010			
A8	The PAP09 team has scheduled a face-to-face review of OASIS Energy Interoperation and deliver guidance on the TC's work. The meeting will be at the July UCAlug meeting (see Hot Links)			
A9	A joint meeting of the UCAlug OpenADR TF and the OASIS EITC took place on June 16, 2010, to foster closer collaboration.			
A10	The Working Group completed and approved the Framework based requirements for PAP09 on June 23, 2010			
A11	The Working Group held a face-to-face review of OASIS Energy Interoperation jointly with UCAlug on July 20; guidance has been delivered to the OASIS TC			
A12	Members of the ISO/RTO Council have joined the OASIS Technical Committee and have contributed additional requirements			
A13	Leadership meetings are being scheduled between the UCAlug OpenADR Task Force and OASIS Energy Interoperation TC			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I2	Note: PAP-15 calls for a standard DR interface		TPMO1	PAP Initiation	2009-07	2009-07	SGIP	
I3	Completion is dependent upon completion of EMIX (PAP03)		TPMO2	PAP Charter Developed	2009-08	2009-08	SGIP	
I4	Completion is dependent upon completion of WS-Calendar (PAP04)		TPMO3	Form Initial Team	2009-08	2009-08	SGIP	
I5	Need to integrate PAP07 Requirements							

✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-08	2009-08	SGIP	
✓	TPMO5	SSO Identified	2009-07	2009-07		
✓	TPMO6	Development of Requirements By PAPWG (see NOTE)	2009-12	2009-12		
✓	TPMO7	Requirements Handoff to SSO	2009-12	2010-04		
🟢	TPMO8	Standards Handback to PAPWG from SSO	2010-12			
🟢	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2011-01			
🟢	TPM10	PAP Complete	2011-04			
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Collect, Analyze, and Consolidate Use Cases and deliver requirements (inc DER)	2009-10	2010-04	NAESB	D1
✓	T2	Direct Load Management: (Residential Applications) Message Semantics Work DR, DER	2010-04	2010-04	Zigbee	D2
✓	T3	Collaborative Load Management: (C+I Applications) Message Semantics, DR, DER	2010-04	2010-04	OASIS	D3,D6
*	T4	Coordinate and merge Direct and Collaborative Load Management development tracks.	2010-04	deferred	NAESB	D1
🟢	T5	Submit collaborative load management task outputs to IEC TC57 when completed	no date		OASIS	D3
🟢	T6	Submit direct load management outputs to IEC TC57 when completed	no date		Zigbee	D2
✓	T7	Downstream user requirements/engagement	2009-10	2009-09	LonMark BACnet	D3
✓	T8	Downstream user requirements/engagement	2009-10	2009-10	Zigbee	D2
✓	T9	Additional message requirements for Distribution (none required)	2009-10	2009-10	MultiSpeak	D1
*	T10	Resale and process for	2009-	deferred	NAESB	D5,D4

		safety and interconnection (deferred)	10			
✓	T11	Vocabulary for DR, DER actor names	2009-09		NAESB	D1
✓	T12	Development of Requirements by PAPWG [See NOTE]	2010-07		PAP09WG	D1
●	T13	Standards Handback to PAPWG from SSO	2010-4Q		OASIS	D6

NOTES: Original [D1](#) completed 2009-12 and delivered 2010-04; T12 addresses high level requirements from the NIST Framework and Roadmap. T4 Was deferred by the WG; T10 was examined and no work was determined to be needed at this time. T5 and T6 will be completed when the work is completed.

Status	Schedule	Deliverables	Resources
April 2010	●	●	●
May 2010	●	●	●
June 2010	●	●	●
July 2010	●	●	●



Status of PAP10: Standard Energy Usage Information:













Updated July 30, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A1	NAESB Committee successfully established to produce PAP 10 Energy Usage Information Model	✓	D1	Use cases and requirements for standard energy usage information exchange
A2	Modified task 5 due date to July 2007 to allow NAESB to summarize results	✓	D2	Short term plans for near-term customer access to usage data based upon today's installed meters
A3	Modified task 6 to represent the tiger team activity which distilled external use cases into an example straw model	🟢	D3	An Information model to satisfy present and future needs for exchange of energy usage information
A4	Revised meeting schedule to attend all NAESB standards calls (weekly) and to meet monthly for summary status	🟢	D4	Implement a plan to expedite harmonized standards development and adoption
A5	The NAESB standard now has substantially complete draft			
A6	NAESB Completes task 5			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Assist NAESB in reaching August 10 goal of draft information model standard	✓	TPMO1	PAP Initiation	2009-07	2009-07	SGIP	
I2	Need to encourage greater participation in NAESB calls -- currently about 30-40 individuals	✓	TPMO2	PAP Charter Developed	2009-07	2009-08	SGIP	
I3	OpenADE, SEP 2.0, are actively engaged in their own revisions which need to be shared with NAESB to preclude divergence. We need to actively participate in all forums and encourage contributions of only unified work.	✓	TPMO3	Form Initial Team	2009-07	2009-08	SGIP	
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-07	2009-08	SGIP	
		✓	TPMO5	SSO Identified	2010-06	2010-06	PAP10WG	
		✓	TPMO6	Development of Requirements By PAPWG	2010-06	2010-06	PAP10WG	D1
		✓	TPMO7	Requirements Handoff to SSO	2010-06	2010-06	PAP10WG	
			TPMO8	Standards Handback to PAPWG from SSO	2010-12		SSO	
			TPMO9	SSO Results submitted to GB by PAP after completing			PAP10WG	

		analysis				
	TPM10	PAP Complete			PAP10WG	
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Reach out to ANSI C12, IEC, ZigBee, and OASIS for formal involvement. Plan additional engagement	2009-08	2010-01	UCAlug	D1
✓	T2	Create preliminary Requirements and Use Cases for early deployment	2009-10	2009-11	UCAlug	D2
✓	T3	Reach out to additional stakeholders especially commercial, industrial, and residential	2010-01	2010-01	EIS Alliance	D1
✓	T4	Gather requirements and use cases for intra-premise scenarios that require inter-domain data exchange	2010-01	2010-01	EIS Alliance	D1
✓	T5	Survey current practice. Gather existing usage communications between energy suppliers and consumers, including providers of intermediary services	2010-07	2010-07	NAESB	D1
✓	T6	Consolidate use cases and requirements into a Basic Energy Usage Information straw model to contribute to NAESB standards process	2010-06	2010-06	PAP10 individuals	D1
✓	T7	Produce first	2010-02	2010-04	UCAlug	D2

	delivery information model for today's meters and infrastructure (from utility information systems)				
 T8	Expedite harmonized standards development and adoption within the associated standards bodies	2011-01		NAESB	D4
 T9	Produce Energy Usage information model specification	2010-12		NAESB	D3

Status	Schedule	Deliverables	Resources
April 2010			
May 2010			
June 2010			
July 2010			

Status of PAP11: Interoperability Standards to Support Plug-in Electric Vehicles (6.2.4)*

Updated August 5, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A1	Assembling and organizing PEV Use Cases from stakeholder inputs. Reformatting in SCAC prescribed template	✓	D1	PEV use cases
A2	Joint Collaboration Agreement Between SAE and Smart Energy Profile Face-to-Face meeting July 13-14, 2010.	✓	D2	Memo SAE and Smart Energy Profile
A3	Provided extensive input to Smart Energy Profile 2.0 SRS 0.7 requirements for PEV messages and information sets.	✓	D3	Map 61850 and 61968
A4	Joint Collaboration with IEC TC57, WG 14, 17, 19, TC69 (PEV) July 2010	✓	D4	Define all SDO related activities
A5	Harmonization with CIM / IEC 61850 Ongoing	✓	D5	Use Cases in SGIP format
A6	Set up Regulatory Affairs Task Force in July 2010 with 6 initial states participating	✓	D6	Organize Regulatory Advisors Task Force
A7	Face-to-Face meeting in April 2010 in conjunction with OpenSG User group meetings.	✓	D7	Drafting high level information model, evolve robust object models
A8	Collaborating with additional SDOs – IEEE, NEC, NFPA, Customer on fire, safety, building standards	●	D8	SAE Evaluation of PLC for PEVs
A9	Face-to-Face meetings with EPRI Infrastructure Working Council. Met jointly in June 9-10, 2010, next meeting September 1-2, 2010 in Detroit, MI.	●	D9	Complete list of PEV Requirements
		✓	D10	Overcome collaborative impediments with IEC
		●	D11	Requirements for Level 3 Connector

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	IEC organization / SGIP alignment	✓	TPMO1	PAP Initiation	2009-09	2009-09	PAPWG	
I2	Coordinate with PAP 15 – PLC communication. Provide requirements.	✓	TPMO2	PAP Charter Developed	2009-09	2009-09	PAPWG	
I3	Coordinate with PAP07 – Energy Storage. Provide requirements	✓	TPMO3	Form Initial Team	2009-09	2009-09	PAPWG	
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-10	2009-10	PAPWG	
		✓	TPMO5	SSO Identified	2009-10	2009-10	PAPWG	
		●	TPMO6	Development of Requirements By PAPWG	2010-08		PAPWG	
		●	TPMO7	Requirements Handoff to SSO	2010-08		PAPWG	
		●	TPMO8	Standards Handback to PAPWG from SSO	2011-05		SSO	
		●	TPMO9	SSO Results submitted to GB by PAP after	2011-06		PAPWG	



		completing analysis				
	TPM10	PAP Complete		2011-09		SGIPGB
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	T1	Assemble PEV related use cases	2009-12	2009-12	Arindam Maitre EPRI	D1
	T1A	Use Cases in SGIP format	2010-01	2009-12	Nathan Tenney PNL	D5
	T1B	Complete PEV Data Communication Requirements for delivery to SSOs	2010-08		TBD	D9
	T2	Drafting high level information model, evolve robust object models	2010-02	2010-02	ZigBee SEP (Greg Robinson - Extensibel Solutions / Robby Simpson, GE)	D7
	T3	Need to overcome collaborative difficulties among SDOs	2009-08	2009-09	SAE (Jose Salazar, SCE)	D2
	T3A	Need to overcome collaborative difficulties with IEC	2010-06	2010-06	Eric Simmon, NIST	D10
	T4	Produce 61968 and 61850 documents for IEC meeting	2010-04	2010-04	TC57 WG 14,17,19 (Greg Robinson)	D3
	T5	Reviewing regulations with regulators	2010-05	2010-05	NEMA (Ben Biroshchak)	D6
	T6	Review related standards for barrier to PEV adoption	2010-04	2010-05	SAE (Efrain Ornelas)	D4
	T7	SAE Evaluation of PLC for PEVs	2010-07		SAE (Rich Scholer, FORD)	D8
	T8	Develop requirements for Level 3 connector	2010-08		NIST (Eric Simmon)	D11

Status	Schedule	Deliverables	Resources
Jun 2010			
Jul 2010			

Status of PAP12: Mapping IEEE 1815 (DNP3) to IEC 61850 Objects

Updated August 10, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A1	NIST has released an RFP to fund key work tasks for PAP12 (and PAP-13). Proposals are due August 17, 2010.	✔	D1	Use Case Diagrams and Data Flow Diagrams
		✔	D2	Scope Description
A2	New IEEE P1815-2010 has now been published by the IEEE (standard for DNP3). This work has occurred on a very fast track with work starting January 2010 and was completed on schedule in early July.	✔	D3	Use Case Descriptions
		✔	D4	IEEE Std 1815 (DNP3)
		🟡	D5	IEC 61850-80-2 New Work Item Proposal
		🟢	D6	IEC 61850-80-2 Mapping Specification
A3	IEC WG10 met in mid June and addressed the IEC 61850-80-2 mapping document. Outline for the new IEC Technical Report (IEC 61850-80-2) was scheduled for July 31.	🟢	D7	DNP3 Application Note - IEC 61850 Integration
		🟢	D8	Changes to IEC 61580 Specifications
		🟢	D9	Changes to DNP3 Specifications
A4	Mapping group is meeting continually to continue to work on approach and details for the mapping. They have developed a "Common Data Classes (61850 CDC) to DNP Object Mapping" spread sheet.	🟢	D10	Example DNP XML and SCL files
A5	The second primary use case is out and under review.			
A6	Draft outline for the new (DNP Technical Committee sponsored) guideline for mapping DNP3 with IEC 61850 is under review.			
A7	Coordination with PAP-7 - we are currently developing a guide on "how you use DNP for communications with inverters" to address current industry needs. Mapping document will address known requirements for inverter communications using IEC 61850 which will lead to the use of 61850-7-420.			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Need contractor help to move the work along	✔	TPMO1	PAP Initiation	2009-09	2009-09	SGIP	
		✔	TPMO2	PAP Charter Developed	2009-11	2009-11	SGIP	
		✔	TPMO3	Form Initial Team	2009-11	2009-11	SGIP	
		✔	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-12	2009-12	SGIP	
		✔	TPMO5	SSO Identified	2009-11	2009-11	SGIP	
		✔	TPMO6	Development of Requirements By PAPWG	2010-04	2010-04	SGIP	
		✔	TPMO7	Requirements Handoff to SSO	2010-05	2010-05	SGIP	

	TPMO8	Standards Handback to PAPWG from SSO	2011-06		SDO	D4, D6, D7
	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2011-07		SGIP	
	TPM10	PAP Complete	2011-08		SGIP	
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Create a proposed outline for a new scoping document.	Jan-2010	Jan-2010	Ron Farquharson	D2
✓	T2	Create data flow diagrams	Mar-2010	Mar-2010	Grant Gilchrist	D1
✓	T3	Create drafts of the use case description based on the topology diagrams	Apr-2010	Apr-2010	Grant Gilchrist	D3
✓	T4	Support IEEE PES Substations WG-C12 with IEEE P1815 - new IEEE standard for DNP	May-2010	May-2010	Ron Farquharson, Lee Smith, Parker McCauley	D6
✓	T5	Define what key data types are required for SCADA	May-2010	May-2010	Rick Murphy	D7
✓	T6	Modify existing architecture diagrams to add DNP to field devices, electronic security perimeter	Apr-2010	Apr-2010	Rick Murphy	D1
🌐	T7	Locate example mappings (existing products) for DNP3 to IEC61850	August-2010		Bruce Muschlitz	D10
🌐	T8	Finalize outline for the IEC 61850-80-2 Technical Report (Mapping DNP with 61850)	August-2010		Christoph Brunner	D6



	T9 Finalize outline for the (DNP Technical Committee sponsored) guideline for mapping DNP3 with IEC 61850.	August-2010		Rick Murphy	D7
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Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			
July 2010			

Status of PAP13: Harmonization of IEEE C37.118 with IEC 61850 and Precision Time Synchronization

Updated August 10, 2010.

A#	Current Activities and Accomplishments
A1	NIST has released an RFP to fund key work tasks for PAP-13 (and PAP-12). Proposals are due August 17, 2010.
A2	A full draft of the IEC 61850-90-5 document has been released to the PAP-13 group for comments by mid September. Next major review will occur at the WG-10 meeting in Moscow in October.
A3	IEEE PSRC H11 (C37.118) PAR revisions and IEEE Working Group changes in support of the decision to split standard are now completed. The measurement portion of the standard will be called C37.118.1 and the communications portion, C37.118.2). A new PSRC Working Group H19 has been formed to address the update of the communications portion (C37.118.2) and to work with the IEC to map with 61850. Work is progressing well on both updates.
A4	IEEE PSRC H7/C7 - IEEE PC37.238 (Power Profile for IEEE 1588) is now Draft 5.0 and is in a pre-ballot review. Lots of good work is happening with this effort. Expecting a sponsor ballot in Sept 2010. No parallel balloting will occur with the IEC but the draft will be submitted to the IEC for comments.
A5	Next steps for the C37.118 Gap List (Enhancement) list is to decide which enhancements to implement on an updated C37.118 communications standard vs which to implement with IEC 61850-90-5 (new Technical Report for Phasor Data Communications)
A6	IEC WG10 mapping task force are continuing with actions to update the use cases and define a roadmap for migration

S	D#	Deliverable
✓	D1	Harmonization use cases and requirements
✓	D2	C37.118 Enhancement (gaps) List
🟢	D3	IEC 61850-90-5 Mapping document
✓	D4	1588 Time Sync Demo
🟢	D5	1588 Power Profile is IEEE PC37.238
🟢	D6	Amendments to IEC 61850 documents
🟢	D7	Amendments to IEEE C37.118 document(s)
🟢	D8	Guideline for Harmonizing C37.118-2005 with IEC 61850

I#	Issues, Concerns & Help Needed
I1	Need contracted help to move the work along

S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
✓	TPMO1	PAP Initiation	2009-09	2009-09	SGIP	
✓	TPMO2	PAP Charter Developed	2009-11	2009-11	SGIP	
✓	TPMO3	Form Initial Team	2009-11	2009-11	SGIP	
✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2009-12	2009-12	SGIP	
✓	TPMO5	SSO Identified	2009-11	2009-11	SGIP	

✓	TPMO6	Development of Requirements By PAPWG	2010-06	2010-06	SGIP	
	TPMO7	Requirements Handoff to SSO	2010-08		SGIP	
	TPMO8	Standards Handback to PAPWG from SSO	2011-04		SSO	D3, D5 - D8
	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2011-05		SGIP	
	TPM10	PAP Complete	2011-06		SGIP	

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Requirements document for Synchrophasors	Sep-2009	Oct-2009	Mark Adamiak	D1
✓	T2	Create outline for IEC mapping document (IEC 61850-90-5)	June-2010	June-2010	HTF3 - Joint IEEE/IEC	D3
✓	T3	Create the draft IEC mapping document (90-5)	Sep-2010	July-2010	IEC WG10	D3
🟡	T4	IEEE PSRC H7 - Power Profile for IEEE 1588 - sponsor ballot	Sept-2010		IEEE H7/C7	D5
✓	T5	Interop demo 1588	Jan-2010	Jan 2010	IEEE H7/C7	D4
🟡	T6	Validate time synchronization requirements	Aug-2010		NIST	D5
🟡	T7	Differences in time stamps C37.118 / IEC 61850	Aug-2010		TC57/WG10	D3
🟡	T8	Amendments to IEC 61850	Jan-2011		TC57/WG10	D6
🟡	T9	NIST Testbed for 1588 - Requirements	Aug-2010		NIST	D5
✓	T10	Create a list of enhancements and gaps for C37.118-2005	May-2010	May-2010	Mark Adamiak	D2, D7
🟡	T11	Outline for the Guideline for Harmonizing	Sep-2010		Ron Farquharson	D8



C37.118-2005 with
IEC 61850

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			
July 2010			




Status of PAP14: Transmission and Distribution Power Systems Model Mapping (11.2.1)






















Updated July 27, 2010.

A#	Current Activities and Accomplishments	S	D#	Deliverable
A3	Received IEEE permission to share C37.239 in recirculation to make it a full standard	✓	D1	Report on the impact of C37.239 on CIM and IEC 61850
A4	Use Cases for Advanced Distribution Expanding to details at greater depth/breadth	✓	D2	A master list of use cases (task 6)
A6	Reviewing prior work to set priorities for most valuable use cases to advance modeling	🔴	D3	New and refined use cases (task 7)
A7	Seeking to integrate work of SGiP SGAC Semantic Committee	🟡	D4	Updates of models (task 7)
A8	Identifying Modeling Objects and Other Application Communication Standards (IKB)			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I1	Work requires specialized expertise from participants within the key SDOs IEEE PSRC and IEC TC 57	✓	TPMO1	PAP Initiation	2009-09	2009-09	SGiP	
I3	Need focussed work on the next generation T&D operations Architecture Perspective	✓	TPMO2	PAP Charter Developed	2009-09	2009-09	SGiP	
I4	Need expert help in developing identified use cases in sufficient detail to contribute to standards development	✓	TPMO3	Form Initial Team	2009-09	2010-03	SGiP	
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2010-03	2010-06	SGiP	
		✓	TPMO5	SSO Identified	2010-01	2010-01		
			TPMO6	Development of Requirements By PAPWG	2010-08			
			TPMO7	Requirements Handoff to SSO	2010-09			
			TPMO8	Standards Handback to PAPWG from SSO	2010-11			
			TPMO9	SSO Results submitted to GB by PAP after completing analysis				
			TPM10	PAP Complete				

S	T#	PAP Work Tasks	Due	Actual	Resp	D#
✓	T1	Investigating impact of IEEE PC37.239	Dec-2009	May 2010	Hughes	D1
✓	T2	In the process of creating team to identify Use Cases	April-2010	May 2010	Hughes	D2
✓	T3	Creating initial use case team – T&D DEWG	Sep-2009	March-2010	Hughes	D2
🟡	T4	Creating use case master	Dec-	July-	WG 19	D2

	list, set priorities	2009	2010		
	T5 Refining use cases	Jun-2010		WG 19	D3
	T6 Reviewing and assigning use cases – WG19 Smart Grid TF to review and assign to other TF's	May-2010			D3
	T7 Working to develop contributions to communication objects and system models	Dec-2010			D4

Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			
July 2010			

Status of PAP15: Harmonize Power Line Carrier Standards for Appliance Communications in the Home

Updated April 29, 2010.

A#	Current Activities and Accomplishments
A1	Coexistence subgroup meetings occur every two weeks: every 2nd and 4th Tuesday of the month, 11am-12:30pm ET
A2	Agreed on action plan composed of Tasks 1, 2, and 3
A3	Created two PLC focus groups, one on low frequency narrowband and one on high frequency broadband technologies
A3	Received the following documentation <ul style="list-style-type: none">ISP coexistence specifications contained in IEEE P1901 Draft (D2.01)G.cx coexistence specifications (Recommendation ITU-T G.9972, version consented in Oct. 2009) - see attachment at end of pageReport from EPRI on appliance connector (document refers to an in-line connector, interfacing the homeowner’s communications with the appliance) - see attachment at end of pageList of the Functional Technical Requirements developed for the coexistence/interoperability cluster by the IEEE 1901 Working group.Home Appliance Requirements (AHAM whitepaper) - see attachment at end of pageOpen Han requirements - see attachment at end of page
A4	Task 1 and 2 completed - deliverables posted

S	D#	Deliverable
✓	D1	Final Task 1 Deliverable and supporting documents
✓	D2	Final Task 2 Deliverable
🔄	D3	Intermediate reports available

I#	Issues, Concerns & Help Needed
I1	Ongoing discussions on whether: <ul style="list-style-type: none">- Only SDO-based technologies or also proprietary ones should have access to the implementation of coexistence mechanisms- SDO-based technologies should have priority over proprietary or industry alliance backed ones in accessing channel resources

S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
✓	TPMO1	PAP Initiation	XXXX-XX	XXXX-XX	SGIP	
✓	TPMO2	PAP Charter Developed	XXXX-XX	XXXX-XX	SGIP	
✓	TPMO3	Form Initial Team	XXXX-XX	XXXX-XX	SGIP	
	TPMO4	Develop List of Deliverables and Tasks with Assignments	XXXX-XX	XXXX-XX	SGIP	

A possible resolution is to adopt the same rationale adopted in IEEE 1901 and ITU-T G.hn: limit access to ISP resources only to specific SDO-based technologies: IEEE 1901 Access and In-Home, and ITU-T G.hn	TPMO5	SSO Identified		XXXX-XX	XXXX-XX		
	TPMO6	Development of Requirements By PAPWG		XXXX-XX			
	TPMO7	Requirements Handoff to SSO		XXXX-XX			
	TPMO8	Standards Handback to PAPWG from SSO		XXXX-XX			
	TPMO9	SSO Results submitted to GB by PAP after completing analysis					
	TPM10	PAP Complete					
	S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	✓	T1	Create a list of existing PLC technologies and revise them according to home appliances requirements	March 23rd, 2010	March 23rd, 2010	Subgroup on coexistence	Final deliverable posted
	✓	T2	Create a list of existing coexistence mechanisms and revise them according to home appliances requirements	March 23rd, 2010	April 13th, 2010	Subgroup on coexistence	Final deliverable posted
	🔄	T3	Harmonize coexistence standards if multiple candidates are found	PAP-15 group will be active until: a) IEEE and ITU finalize the alignment of the BB-PLC coexistence specs		Subgroup on coexistence	a) Work completed, BB coexistence standards approved by ITU-t and IEEE in June 2010. b) Work in progress.

12	Ongoing discussions on whether coexistence should include installed base of PLC technologies and how
	Partial alleviation of this problem can be achieved using the techniques described in ITU-T Contribution 09GS-078 (ITU-T Contribution 09GS-078 for PAP15.pdf)



			b) NB-PLC coexistence project is launched by an SDO of choice and completed the standard			
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Status	Schedule	Deliverables	Resources
January 2010			
February 2010			
March 2010			
April 2010			
May 2010			
June 2010			




Status of PAP16: Wind Plant Communications

Updated August 10, 2010.

A# Current Activities and Accomplishments		S	D#	Deliverable			
A1	Met with EN 61400-25 representatives to discuss requirements	✓	D1	Requirements related to wind power plant communications from use cases			
A2	Single set of requirements consolidated from use cases	✓	D2	Requirements mapping and gaps existing between 61400-25 standard and Task 1 use cases			
A3	Mapping requirements to 61400-25 begun	✓	D3	Best practices on the application of 61400-25 in the US			
A6	Met with IEEE Wind Power Coordinating Committee	✓	D4	Specific recommendations to the IEC TC 88 working group			

I#	Issues, Concerns & Help Needed	S	T#	PMO PAP Milestones	Due	Actual	Resp	D#
I3	Coordinate and collaborate with PAP 7	✓	TPMO1	PAP Initiation	2010-01	2010-01	SGIP	
I4	May need to collaborate with PAP 12	✓	TPMO2	PAP Charter Developed	2010-02	2010-02	SGIP	
		✓	TPMO3	Form Initial Team	2010-03	2010-03	SGIP	
		✓	TPMO4	Develop List of Deliverables and Tasks with Assignments	2010-04	2010-04	SGIP	D1
		✓	TPMO5	SSO Identified	2010-02	2010-08-05	PAP16wg	D1
		✓	TPMO6	Development of Requirements By PAP 16 WG	2010-09		PAP16wg	D2,D3
		✓	TPMO7	Requirements Handoff to SSO	2010-10		PAP16wg	D4
		✓	TPMO8	Standards Handback to PAPWG from SSO	2011-07		SSO	
		✓	TPMO9	SSO Results submitted to GB by PAP after completing analysis	2011-08		PAP16wg	

	TPM10	PAP Complete	2011-11		PAP16wg	
S	T#	PAP Work Tasks	Due	Actual	Resp	D#
	T1	Develop requirements related to wind power plant communications from use cases	June-2010	June-2010	UWIG et al	D1
	T2	Map the requirements of task 1 into 61400-25. Starting with the elements of the Table of Contents of 61400-25	July-2010		UWIG/61400-25 User Group	D2
	T3	Develop a best practices list for the application of 61400-25. Identify opportunities to harmonize the CIM and 61400-25	September-2010		UWIG/All	D3
	T4	Provide specific recommendations to IEC TC 88 through USTAG for 61400-25 and follow-up	November-2010		All/UWIG/61400-25 User Group	D4
	T5	Coordinate with PAP 7 in extending ES-DER standards to transmission level	September-2010		PAP 16 / PAP 7	D4

Status	Schedule	Deliverables	Resources
June 2010			
July 2010		